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14 October 1955

MEMORANDUM FOR: The Record

SUBJECT : - 13 October 1955

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Plastic Flow Time Delay

Little tangible progress was noted on this project since the last inspection of 30 August. Both the number and type of prototypes to be made had been agreed upon at that time; however, none of these have yet been built.

This relatively poor showing should not be interpreted as reflecting on the effort expended by the project engineer. The project engineer has been busy. But much of his time has been spent attending to matters of administration with a consequent reduction of time spent actually working on the project.

Inasmuch as no prototypes had as yet been completed, the program was modified to include testing the feasibility of using a plastic flow time delay as a release mechanism for dropping leaflets from balloons. The program at present calls for making up the following prototypes:

1. Time delay firing device with spring, spherical ball, 1° tapered wall tubing
2. Time delay firing device with spring, cylindrical plug, 1° tapered wall tubing
3. Time delay firing device with spring, orifice, silicone gum
4. Time delay release device with spherical ball, straight-walled tubing
5. Time delay release device with orifice, silicone gum

Delays incorporating Neg'ator springs have been removed from the prototype list inasmuch as there is enough to work on now under the present working conditions. The first prototypes should be ready within two weeks.

By combining an electric timer, clockwork mechanism, photoflood light and a 35 mm camera, a novel film recording device has been made. This will be placed in the test chamber with the prototypes undergoing timing tests and will take a picture of the delays every half hour. In this manner it will be possible to periodically record the progress of the delays.

Hot - Dip Testing

This program has likewise been plagued with administrative troubles,

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though not to the extent of the Plastic Flow Time Delay program. Here the difficulty lies in getting permission to set up the dip tank on a demolition range to test cooking-off of dangerous materials.

To date three (3) items have been found dippable in their standard containers both from a packaging and safety standpoint. These are the Incendiary Head, the 2.36" Adapter, and the 3.50" Adapter. Those which present problems from a packaging standpoint only are the RR Torpedo, Fuze Lighters, Thermit Well, MK I and MK II Pencils, A. C. Delay, Fuzes, and C-3 and C-4 Plastic Explosives. Time fuze, Primacord, and the PTI are the only items considered dangerous.

In addition to continuing work on package development, [] will go ahead and twenty (20) each of the Incendiary Heads and Rocket Adapters to get them out of the way and to get the testing started.

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Latex has been tried with partial success as a pre-dip coating to prevent air bubbles. Bubbling is a major problem with most items. Several package designs at [] incorporate nylon tear strings to simplify opening.

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Engineering Division, TSS

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